REMARKS

Claims 1-11 are all the claims pending in the application.

The Examiner has rejected claims 1, 3-4 and 7 under 35 U.S.C. § 102(e) as being anticipated by Corbett et al. (U.S. Patent No. 6,351,642). Applicant traverses these rejections because Corbett et al. fails to disclose all of the claim limitations. Specifically, Corbett et al. fails to disclose at least the following limitations:

Claim 1:

> a calculation means, which, based on said position information acquired by said first acquisition means and said second acquisition means and ***position information input for the target position***, calculates an angle formed between a line joining said current position and said base station and a line joining said current position and said target position;
>
> a first locating means, which, ***based on a received level of a signal transmitted from said base station, locates a direction to a location of said base station***; and
>
> ***a second locating means, which, based on said direction located by said first locating means and said angle calculated by said calculation means, locates a direction to said target position***.

Claim 1 requires that the position information of the target position be input to the mobile telephone. See, for example only, input section 12 in figure 1. Corbett et al. does not disclose the position information for any target position; rather it discloses only the positions of the mobile station MS and base stations. In addition, since Corbett et al. fails to disclose a target position, it likewise fails to disclose the input of target position information.

Regarding the first locating means and second locating means, the Examiner asserts that Corbett et al. col. 5, lines 26-53 and col. 8, lines 8-37 disclose the claimed limitations. These portions of Corbett et al. are shown below:

> FIG. 5 illustrates an exemplary application of the method steps described above. In FIG. 5, the current location of the mobile station is shown by points (x,y) on a plane. Each base station (BS_1 . . BS_n) in proximity to the mobile station further has a location $\{(x_1, y_1) \ldots (x_n, y_n)\}$. Given two consecutive mobile station location measurements, performed as described above, the velocity (V) of the mobile station can thus be calculated. With the mobile station velocity (V) calculated, the component of the velocity vector ($V \cos \theta_1, \ldots, V \cos \theta_n$) of the mobile station towards each base station ($BS_1, \ldots,$ BS.) in a chosen set of base stations in proximity to the mobile station can further be calculated. For example, as shown in FIG. 5, the mobile station velocity component towards BS_1 is equal to $V \cos \theta_1$ and the component towards BS_2 is equal to $V \cos \theta_2$. The velocity components of V in the direction of each base station can then be used for estimating the future location of the mobile station and the weighted probability of the mobile station arriving in each proximate cell based on, for example, conventional kinematics well known to one skilled in the art. An estimation of the bias values for each base station in proximity to the mobile station can also then be estimated based on the calculated velocity component vectors and the probability of arrival in each proximate cell such that, for example, the bias values would satisfy the relation $BIAS_{BSn} V \cos \theta_n$. As applied to FIG. 5, this would mean that a higher bias value would be associated with BS_1, for example. Col. 5, lines 26-53.

> In the exemplary embodiments described above, the system verifies the location and velocity of the mobile station. However, in an additional exemplary embodiment, these functions can be performed by the mobile station itself. As shown at step 18 in FIG. 4, the mobile station location is determined by the mobile station, or by the system, in a manner previously discussed. The mobile station processor then calculates 19 the mobile station velocity based on a current location and one or more previous mobile station locations and the time (Δt) elapsed between the location measurements. Using the measured mobile station location and the calculated mobile station velocity the location of the mobile station at some future time is estimated 20. In its simplest form, this estimation can use conventional kinematics well known to one skilled in the art. In a more complex form, the system can take into account known terrain features (e.g., hills,

> gradients, traffic information from an external news source) to determine the estimated future location.
>
> After estimating the future location of the mobile station, the mobile station then accesses 21 stored proximate cell location data previously received from the system. Based on this accessed proximate cell location data and the estimated future location of the mobile station, a weighted probability of arrival in each proximate cell (C_j) can be determined 22. A bias value for each proximate cell/sector can then be estimated 23 based on the determined weighted probabilities of arrival. Exemplary applications of the method steps above have previously been described with reference to FIGS. 5 and 6. Col. 8, lines 8-37.

There is no disclosure or suggestion in these portions of Corbett et al. for a first locating means, which, ***based on a received level of a signal transmitted from said base station, locates a direction to a location of said base station***; or ***a second locating means, which, based on said direction located by said first locating means and said angle calculated by said calculation means, locates a direction to said target position***. For example, the direction to BS_1, which the Examiner asserts is the claimed base station, is based on the velocity vector V of the mobile station. There is absolutely no disclosure or suggestion of locating a direction based on a received level of a signal. Likewise, the direction to BS_2, which the Examiner asserts is the target position, is also based on the velocity vector V of the mobile station and not on the direction located by said first locating means and said angle calculated by said calculation means.

Regarding claims 3-4, they should be allowable at least based on their dependence from claim 1 for at least the same reasons as claim 1.

Regarding claim 7, Corbett et al. fails to disclose or suggest at least the following claim limitations:

Claim 7:

> ***a directional antenna and a strength indicator, which, based on a received level of a signal transmitted from said base station, locate a direction to a location of said base station***;
>
> a calculation section, which, based on said base station position information and current mobile telephone position information, and ***position information input for the target position, calculates an angle formed between a line joining said current position and said base station and a line joining said current mobile telephone position and said target position, and based on said located direction and said calculated angle, locates a direction to said target position***.

The Examiner cites the same two portions of Corbett et al. shown above and col. 8, lines 38-55 to support the rejections. However, there is no disclosure or suggestion in these portions of Corbett et al. for a ***directional antenna and a strength indicator, which, based on a received level of a signal transmitted from said base station, locate a direction to a location of said base station***; or a calculation section, which, based on said base station position information and current mobile telephone position information, and ***position information input for the target position, calculates an angle formed between a line joining said current position and said base station and a line joining said current mobile telephone position and said target position, and based on said located direction and said calculated angle, locates a direction to said target position***.

For example, the direction to BS_1, which the Examiner asserts is the claimed base station, is based on the velocity vector V of the mobile station. There is absolutely no disclosure or suggestion of locating a direction based on a received level of a signal. Likewise, the direction to BS_2, which the Examiner asserts is the target position, is also based on the velocity vector V of

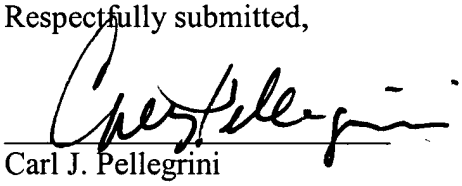
the mobile station and not on the direction located by said first locating means and said angle calculated by said calculation means.

The Examiner has rejected claims 2, 5, 6 and 8-11 under 35 U.S.C. § 103(a) as being unpatentable over Corbett et al. in view of Takeshi (JP 10-281801). Applicant traverses these rejections because the cited references fail to disclose all of the claim limitations. Specifically, Takeshi fails to overcome the deficiencies of Corbett et al. as discussed above. Therefore, these claims should be allowable at least based on their dependence from claim 1 or 7 for at least the same reasons as claims 1 or 7.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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